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08/269,323 06/30/94 NIMITZ

J 2124001D *ma*

EXAMINER

ANTHONY, J

ART UNIT

PAPER NUMBER

*13*

1208

DATE MAILED: 05/01/96

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This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 11/6/96 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.                 | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/> _____   |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 157-158, 160-182 are pending in the application.  
Of the above, claims 180-182 are withdrawn from consideration.
2. ☒ Claims 1-156, AND 159 have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 157-158 AND 160-179 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

**EXAMINER'S ACTION**

DETAILED ACTION

*Election/Restriction*

1. Newly submitted claims 180-182 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Group I. Claims 157-158, and 160-179 are, drawn to a method of use of a fire-extinguishing agent, classified in Class 169, subclass 46.

Group II. Claims 180-182 are, drawn to a fire extinguishing agent, classified in Class 252, subclass 8.

2. Inventions II and I are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (M.P.E.P. § 806.05(h)). In the instant case the product as claimed can be used as a refrigerant.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given

above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 180-182 are withdrawn from consideration as being directed to a non-elected invention. See 37 C.F.R. § 1.142(b) and M.P.E.P. § 821.03.

#### *Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

8. Claims 157-158, and 160-179 are rejected under 35 U.S.C. § 103 as being obvious over "The Technical Report" distributed by the Defense Technical Information Center, Alexandria, Va. optionally in view of Japanese Patent Number 4-323294 (dated

11/12/92).

The Defense Technical Information Center Technical Report teaches fluoriodoalkanes such as **CF3I**, **CF2ICF2I**, and **CF3CF2I** as fire-extinguishing agents and fire-suppression agents, (see Tables I and II and VII). On pages 39-43, and 62 the reference directly suggests binary mixtures of halogenated carbons and halogenated hydrocarbons including binary mixtures where fluoriodoalkane is one of the components. In Table VII on page 62 a binary mixture of methyl iodide and bromoethane is directly taught. Directly taught types of halogenated carbons are the perfluorocarbons. Directly taught types of halogenated hydrocarbons are the fluorohydrocarbons. On page 16 the reference suggestions are made on ways of determining the appropriate concentration range of the fire-extinguishing agents and/or fire-suppression agents. On page 39 under the heading "Effect of Binary Mixtures of Halogen Compounds", the reference directly talks about binary mixtures having a boiling point. Although the words "azeotropic blend" or "near azeotropic blend" are not directly used, the fact that the reference speaks of binary mixtures having a boiling point and not a boiling range implies if not explicitly at least implicitly that "azeotropic blend" or "near azeotropic blend" are being contemplated by the reference.

JP teaches refrigerant compositions and a method of refrigeration that are deemed to anticipate applicant's claimed inventions. The refrigerant composition comprises: 1) at least 5% of a **trifluoriodomethane** compound, preferably 5 to 60% by weight and most preferably 5 to 30% by weight, (see page 3) and

2) at least one heat transmitting fluid selected from propane, propylene, cyclopropane, dimethyl ether, methyl methylene amine, R-32, **R-143a**, **R-152a** and **R-161**. On page 5 of the specification under the heading, "Effects of the Invention", JP teaches that "(3) This invention provides a heat transmitting medium having a **boiling point** which is close to the boiling point of commonly used refrigerants . . .". It is well known that a boiling point for a mixture is synonymous with a mixture that has an azeotropic nature. Furthermore, on page 6, lines 1-9, the JP patent discloses that **trifluoroiodomethane** evinces flame extinguishing properties, and can be used in admixtures with an additive selected from **R-143a**, **R-152a**, **R-161** ect., to form an admixture that is non-flammable.

Applicant's invention is deemed to differ from the applied reference because: 1) There is no specific teaching (i.e. by way of a specific example) that explicitly teaches an "azeotropic blend" or "near azeotropic blend" of a fluoriodocarbon and an additive selected from the group consisting of perfluorocarbons, hydrofluorocarbons and fluoroethers, (i.e. for claims 157-158, 160-169, and 178-179 only)., and 2) There is no specific teaching (i.e. by way of a specific example) to where the fire-extinguishing agent comprises a blend of a fluoriodocarbon and an additive selected from the group consisting of perfluorocarbons, hydrofluorocarbons and fluoroethers (i.e. for claims 170-177 only).

In regards to the first and second differences, applicant's invention is deemed to be at once envisaged by one having

ordinary skill in the art from the teachings and suggestions of the reference taken as a whole, since the reference directly teaches applicant's claimed species of fluoriodocarbons, perfluorocarbons, hydrofluorocarbons and fluoroethers as individually useful as fire-extinguishing agents. The reference also directly teaches and suggests employing binary mixtures of halogenated carbons and halogenated hydrocarbons, see TABLE VII. Furthermore, the reference is deemed to strongly suggest, at least implicitly, applicant's claimed "azeotropic blend" or "near azeotropic blend" fire extinguishing agents on page 39 under the heading "Effect of Binary Mixtures of Halogen Compounds", where the reference directly talks about binary mixtures having a boiling point. In any case, the courts have declared that to employ two or more materials in combination for the same purpose they are taught to be individually useful is not patentable, In re Kerkhoven, 205 USPQ 1069 (CCPA 1980).

In the alternative, applicant's invention is deemed to be obvious over the Defence Technical Report in view of the JP patent. In this case, the JP patent provides further support that it is well known in the art that constant boiling point admixtures of the fire extinguishing agent **trifluoriodomethane** with a fluorohydrocarbon, such as **R-143a**, **R-152a**, **R-161**, are known in the art, and that such admixtures are non-flammable in nature. It would thus have been even more obvious to one having ordinary skill in the art using the additional motivation provided by the JP patent, to employ constant boiling point admixtures of the fire extinguishing agent **trifluoriodomethane**

with a fluorohydrocarbon as the fire extinguishing agent used in the fire extinguishing methods as taught by the Defence Technical Report.

*Response to Amendment*

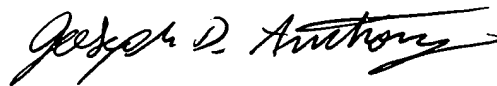
9. Applicant's arguments filed in the Rule 1.129(a) amendment on 1/16/96, have been fully considered but they are not deemed to be persuasive. The previous 35 U.S.C. 112 rejections, and the 35 U.S.C. 102 type rejection, made over applicant's claimed invention, have been dropped. Applicant's arguments, on pages 9-10 of the amendment, that the applied Technical Report in the bridging pages 2 and 3, does not motivate one having ordinary skill in the art to formulate fire-extinguishing admixtures comprising a fluoroiodocarbon and an additive selected from fluoroiodocarbons, perfluorocarbons, hydrofluorocarbons and fluoroethers, is wholly rejected. A reading of the above pages in the Technical Report shows that binary mixtures of fire-extinguishing agents are disclosed to be advantageous in some circumstances depending on the characteristics of the particular mixtures used. Although the Technical Report does state that no generalization could be made regarding choice of the constituent in the mixture such in no way is deemed to teach away from applicant's claimed invention. The examiner has provided sufficient motivation and support for the rejection of applicant's claims. Furthermore, applicant has shown neither superior or unexpected results for their particular fire-extinguishing admixtures over those directly taught by the

Technical Report. Finally, the JP patent is deemed to put to rest any doubt that admixtures of a fluoroiodocarbon fire extinguishing agent, i.e. trifluoroiodomethane, with fluorohydrocarbons are known in the art.

**Examiner Information**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (703) 308-0446. This examiner can normally be reached on Monday through Friday from 9:00 a.m. to 5:30 p.m. in the eastern time zone. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Sharon Gibson, can be reached on (703) 308-4552. The group 1200 FAX machine number is (703) 308-4556. Unofficial correspondence transmitted by FAX must be marked "DRAFT". All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner. Any inquiry of a general nature or relating to the status of this application should be directed to the Customer Service Center receptionist whose telephone number is (703) 308-1235. The Customer Service Center is located on the Seventh Floor of CM-1 and will be the welcome point for all visitors to the building.

**Examiner Joseph D. Anthony**



**ART UNIT 1208**

4/22/96